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10/763,577	01/22/2004	Clark Robison	WEAT/0340	4891

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EXAMINER	
YACOB, SISAY	

ART UNIT	PAPER NUMBER
2612	

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/763,577	ROBISON ET AL.	
	Examiner	Art Unit	
	Sisay Yacob	2612	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *14 June 2006*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-8 and 10-34* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-8 and 10-34* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

1 This communication is in response to applicant's amendment to first non-final office action, which was filed June 14, 2006.

2 An amendments and arguments to rejected claims 1-23 have been entered and made of record in the application of Robison et al., "Control apparatus for automated downhole tools" filed on January 22, 2004.

Claims 1, 12 and 20 are amended.

Claims 2-8, 10, 11 and 13-17 are the same as originally filed.

Claim 9 is canceled.

Claims 18, 19 and 21-23 are as previously presented.

New claims 24-34 are introduced.

Claims 1-8 and 10-34 are pending.

Response to Arguments

3 Applicant's amendments and arguments with respect to claims 1-8,10-23 and newly introduced claims 24-34 have been considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made.

Rejections - 35 USC § 103

4 The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5 The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

6 Claims 1-6, 8, 10-13, 16-26 and 33-34 are rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent of Pia et al., (5,890,540) in view of US Patent of Angle (6,431,270).

7 As to claim 1, Pia et al., discloses a method of operating one or more downhole devices in a wellbore (Col. 1, lines 3-5) comprising disposing the one or more devices in the wellbore (Col. 1, lines 6-14), the one or more devices having at least an open and a

closed position (Col. 2, lines 10-30), providing a signal to the one or more devices to move between the open and the closed position (Col. 3, lines 47-67; Col. 4, lines 1-24), the signal being generated based upon an operator's interaction (Col. 2, lines 50-62), monitoring the signal to confirm movement of the one or more downhole devices between the positions (Col. 2, lines 62-65; Col. 4, lines 24-29). However, Pia et al., does not expressly disclose the signal being computer generated based upon an operator's interaction with a touch screen and monitoring the signal being via the touch screen. In the same field of endeavor, Angle discloses a method of operating one or more downhole devices in a wellbore, the signal being computer generated based upon an operator's interaction with a touch screen (Col. 4, lines 37-56; Col. 7, lines 25-67; Col. 8, lines 1-34) and monitoring the signal via the touch screen to confirm movement of the one or more downhole devices between the positions (Col. 14, lines 38-46; Col. 16, lines 61-67; Col. 17, lines 1-18).

It would have been obvious, to one skilled in the art, at the time of the invention to modify the method of operating one or more downhole devices in a wellbore of Pia et al., by incorporating the computer generated operator's interaction with a touch screen and monitoring the signal via the touch screen, as disclosed by Angle, in order to have a method of operating one or more downhole devices in a wellbore comprising disposing the one or more devices in the wellbore, the one or more devices having at least an open and a closed position, providing a signal to the one or more devices to move between the open and the closed position, the signal being computer generated based upon an operator's interaction with a touch screen, and monitoring the signal via the

touch screen to confirm movement of the one or more downhole devices between the positions, because Pia et al., discloses a method of operating one or more downhole devices in a wellbore that may be operated and monitored from the surface to move the downhole devices to desired locations and confirm movement of the downhole devices and Angle disclose a method of operating one or more downhole devices in a wellbore, the signal being computer generated based upon an operator's interaction with a touch screen to improve quality of the displayed image. One skilled in the art realizes incorporating a touch screen for operator's interaction and monitoring the signal to confirm movement of the one or more downhole devices between positions provides would be a user friendly user interface and employing a touch screen for user interface is well known and widely used in various environments.

8 As to claim 2, the method of claim 1, further, Pia et al., discloses providing the signal to the one or more devices comprises transmitting the signal to a controller (Col. 2, lines 15-30; 53-56).

9 As to claim 3, the method of claim 2, further, Pia et al., discloses comprising moving the one or more devices between the open and the closed position (Col. 6, lines 54-67; Col. 7, lines 1-2).

10 As to claim 4, the method of claim 1, further, Pia et al., discloses the one or more devices are operated using fluid pressure (Col. 4, lines 8-19).

11 As to claim 5, the method of claim 4, further, Pia et al., discloses the signal to the one or more devices comprises transmitting the signal to a controller (Col. 1, lines 12-14).

12 As to claim 6, the method of claim 5, further, Pia et al., discloses placing the one or more devices in fluid communication with a fluid source (Col. 1, lines 12-14; Col. 2, lines 34-38).

13 As to claim 8, the method of claim 1, further, Pia et al., discloses moving the one or more downhole devices between an open position and a closed position (Col. 6, lines 56-67; Col. 7, lines 1-3).

14 As to claim 10, the method of claim 8, further, Pia et al., discloses moving the one or more downhole devices comprises providing a pressure to operate a controller to move the one or more downhole devices (Col. 6, lines 56-67; Col. 7, lines 1-3).

15 As to claim 11, the method of claim 8, further, Pia et al., discloses moving the one or more downhole devices comprises providing a first pressure to operate a controller (Col. 5, lines 41-51), and providing a second pressure to move the one or more downhole devices (Col. 5, lines 51-67; Col. 6, lines 1-10).

16 As to claim 12, Pia et al., discloses a method of monitoring operation of a downhole tool (Col. 1, lines 3-5), the method comprising providing a signal to the downhole tool (Col. 2, lines 50-65), whereby the signal causes the tool to switch between an initial and a second state (Col. 3, lines 47-67; Col. 4, lines 1-24), and monitoring variables within a fluid control system for operating the downhole tool to confirm the state of the downhole tool (Col. 2, lines 44-56), the variables including at least one of pressure, time, total flow, and flow rate (Col. 2, lines 44-65; Col. 4, lines 24-29).

17 As to claim 13, the method of claim 12, further, Angle discloses monitoring the variables comprises viewing a touch screen having information related to the variables (Col. 7, lines 25-36).

18 As to claim 16, the method of claim 12, further, Pia et al., discloses the downhole tool comprises one or more fluid control devices (Columns 2-3).

19 As to claim 17, the method of claim 12, however, Pia et al., does not expressly disclose interacting with the touch screen to modify the operation of the downhole tool. In the same field of endeavor, Angle discloses a method of monitoring operation of a downhole tool by interacting with the touch screen to modify the operation of the downhole tool (Col. 14, lines 38-46; Col. 16, lines 61-67; Col. 17, lines 1-18).

It would have been obvious, to one skilled in the art, at the time of the invention to modify the method of monitoring operation of a downhole tool of Pia et al., by incorporating the touch screen to modify the operation of the downhole tool, as disclosed by Angle, in order to have a method of monitoring operation of a downhole tool by interacting with the touch screen to modify the operation of the downhole tool, because Pia et al., discloses a method of monitoring operation one or more downhole devices in a wellbore that may be operated and monitored from the surface to move the downhole devices to a desired locations and confirm movement of the downhole devices and Angle disclose a method of monitoring operation one or more downhole devices in a wellbore by interacting with the touch screen to modify the operation of the downhole tool to improve quality of the image.

20 As to claim 18, Pia et al., discloses a method of operating a plurality of downhole devices in a wellbore (Col. 1, lines 3-5) comprising disposing the plurality of downhole devices in the wellbore (Col. 1, lines 6-14), each of the plurality of downhole devices having at least an open position and a closed position (Col. 2, lines 10-30) and in selective communication with a fluid source (Col. 1, lines 12-14; Col. 2, lines 34-38), positioning a controller in the wellbore (Col. 3, lines 47-67), generating a signal based upon an operator's interaction at the surface (Col. 21, lines 20-45), transmitting the signal to the controller (Col. 6, lines 39-42), whereby the controller places a selected downhole device in fluid communication with the fluid source (Col. 2, lines 44-65; Col. 4, lines 24-29), and operating the selected downhole device between the open position

and the closed position (Col. 4, lines 20-29). However, Pia et al., does not expressly disclose the signal generated based upon an operator's interaction being with a touch screen. Angle discloses the signal being generated based upon an operator's interaction with a touch screen (Col. 4, lines 37-56; Col. 7, lines 25-67; Col. 8, lines 1-34; Col. 14, lines 38-46; Col. 16, lines 61-67; Col. 17, lines 1-18).

It would have been obvious, to one skilled in the art, at the time of the invention to modify the method of operating a plurality of downhole devices in a wellbore of Pia et al., by incorporating the signal generated operator's interaction with a touch screen, as disclosed by Angle, in order to have a method of operating a plurality of downhole devices in a wellbore comprising disposing the plurality of downhole devices in the wellbore, each of the plurality of downhole devices having at least an open position and a closed position and in selective communication with a fluid source, positioning a controller in the wellbore, generating a signal based upon an operator's interaction with a touch screen, transmitting the signal to the controller, whereby the controller places a selected downhole device in fluid communication with the fluid source, because Pia et al., discloses a method of operating one or more downhole devices in a wellbore that may be operated and monitored from the surface to move the downhole devices to desired locations and confirm the movement of downhole devices to the desired locations and Angle discloses a method of operating a plurality of downhole devices in a wellbore, the signal being generated based upon an operator's interaction with a touch screen. One skilled in the art realizes incorporating a touch screen for operator's interaction and monitoring the signal to confirm movement of the one or more downhole

devices between positions provides would be a user friendly user interface and employing a touch screen for user interface is well known and widely used in various environments.

21 As to claim 19, the method of claim 18, further, Pia et al., discloses providing a first fluid pressure to move the selected downhole device between the open position and the closed position (Col. 6, lines 56-67; Col. 7, lines 1-3).

22 As to claim 20, the method of claim 19, further, Pia et al., discloses the signal comprises a second fluid pressure (Col. 5, lines 51-67; Col. 6, lines 1-10).

23 As to claim 21, the method of claim 20, further, Pia et al., discloses the first fluid pressure is higher than the second fluid pressure (Col. 5, lines 41-67; Col. 6, lines 1-10).

24 As to claim 22, the method of claim 18, further, Pia et al., discloses the signal causes rotation of an actuating member of the controller (Col. 5, lines 60-67).

25 As to claim 23, the method of claim 22, further, Pia et al., discloses a different downhole device is placed in communication with the fluid source as the actuating member is incrementally rotated (Col. 6, lines 50-67).

26 As to claim 24, the method of claim 22, further, Angle discloses comprising displaying an image representing the rotation of the actuating member on the touch screen (Col. 14, lines 38-46).

27 As to claim 25, the method of claim 24, further, Angle discloses wherein the image comprises an indicator bar (Col. 7, lines 25-67; Col. 8, lines 1-34).

28 As to claim 26, the method of claim 18, further, Pia et al., wherein a single fluid control line extends between the controller and the fluid source (Col. 1, lines 12-14; See figure 4).

29 As to claim 33, the method of claim 18, further comprising removing the controller fluid communication with the plurality of downhole devices by selecting an icon on the touch screen (Col. 5, lines 36-45).

30 As to claim 34, the method of claim 18, further comprising displaying a status on the touch screen indicative of the open or closed position for at least one of the plurality of downhole devices (Col. 4, lines 37-56; Col. 7, lines 25-67; Col. 8, lines 1-34; Col. 14, lines 38-46; Col. 16, lines 61-67; Col. 17, lines 1-18).

31 Claims 7, 14 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent of Pia et al., (5,890,540) in view of US Patent of Angle (6,431,270) and further in view of US Publication of Geaghan et al., (20030063073).

32 As to claims 7 and 14, the method of claims 5 and 13, however, the combination of Pia et al., and Angle does not expressly disclose a signal to the one or more devices further comprises selecting an icon representing the one or more devices on the touch screen. In the field of touch panel system and method for distinguishing multiple touch inputs, Geaghan et al., discloses selecting an icon representing the one or more devices on the touch screen for electronic display systems as a replacement or supplement to a conventional keyboard and/or a mouse (Page 1, Par. 0002-0003; Page 2, Par. 0024; See figure 8).

It would have been obvious, to one of ordinary skilled in the art, at the time of invention, to modify a method of operating a plurality of downhole devices in a wellbore the touch screen display of manipulating the one or more devices of Angle, by incorporating sending signal to the one or more devices by selecting an icon as taught by Geaghan et al., in order to have sending a signal to the one or more devices further comprises selecting an icon representing the one or more devices on the touch screen, because Angle discloses a touch screen display for operating one or more downhole devices that allow the operator to manipulate the image to get a desired view (Col. 4, lines 37-56; Col. 7, lines 25-67; Col. 8, lines 1-34; Col. 14, lines 38-46; Col. 16, lines 61-67; Col. 17, lines 1-18) and Geaghan et al., a touch screen that user may selecting an

icon representing different operation or devices. One skilled in the art realizes incorporating a touch screen for operator's interaction and monitoring the signal to confirm movement of the one or more downhole devices between positions provides would be a user friendly user interface and employing a touch screen for user interface is well known and widely used in various environments.

33 As to claim 15, the method of claim 13, further, Geaghan et al., discloses the touch screen comprises a touch sensor (Page 1, Par. 0007), controller (Page 3, Par. 0034, lines 1-5, 21-23), and software driver (Page 1, Par. 0034, lines 20-21).

34 Claims 27-32 are rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent of Pia et al., (5,890,540) in view of US Patent of Angle (6,431,270) and further in view of US Patent of Zimmerman (6,109,357).

35 As to claim 27, the method of claim 18, however, the combination of Pia et al., and Angle does not expressly disclose wherein each of the plurality of downhole devices has a fluid control line connected with the controller. In same field of endeavor, Zimmerman discloses a method for plurality of downhole devices having a fluid control line connected with the controller (Col. 1, lines 48-67; Col. 2, lines 1-67; Items 24 and 25 of figure 4; See figures 1a-f and 2a-c).

It would have been obvious, to one skilled in the art, at the time of the invention to modify the combination of Pia et al., and Angle, by incorporating the a fluid control

line for operation of downhole tools, as disclosed by Zimmerman, in order to have a method of operation of a downhole tool, the plurality of downhole devices having a fluid control line connected with the controller, because Pia et al., discloses a method of operation one or more downhole devices in a wellbore that may be operated and monitored from the surface having a fluid controller line and Zimmerman disclose a method of operation a plurality of downhole devices having multiple fluid control lines connected with the controller.

36 As to claim 28, the method of claim 27, further, Zimmerman discloses wherein a single fluid control line extends between the controller and the fluid source (Col. 2, lines 45-48).

37 As to claim 29, the method of claim 27, further, Zimmerman discloses comprising monitoring one or more conditions within the fluid control line of at least one of the plurality of downhole devices (Col. 2, lines 54-67).

38 As to claim 30, the method of claim 29, further, Pia et al., discloses wherein the one or more conditions comprise at least one of pressure, time, total flow, and flow rate (Col. 2, lines 44-65; Col. 4, lines 24-29).

39 As to claim 31, the method of claim 29, further, Pia et al., discloses notifying the operator if operating the selected downhole device is not completed within an amount of

time base on monitoring the one or more conditions (Col. 2, lines 44-56; Col. 4, lines 20-36).

40 As to claim 32, the method of claim 29, further, Angle discloses displaying the one or more conditions on the touch screen (Col. 14, lines 38-46).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sisay Yacob whose telephone number is (571) 272-8562. The examiner can normally be reached on Monday through Friday 8:00 AM - 4:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jeffery A. Hofsass can be reached on (571) 272-2981. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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08/18/2006

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